

APOTHECARY WEIGHT TOKENS

BY RACHAEL WIEGAND

02/20/2019

What Are They?

- Apothecary Weight Tokens were used by pharmaceutical chemists and bullion merchants from 1878 until the late 1960's to measure out powders and medicines. However, there are much older specimens of pharmaceutical and medical weight tokens (similar to apothecary weight tokens) from Rome, Holland, Germany, Austria, and Italy.
- A balance beam scale was used to measure powder on one side and the apothecary weight token was put on the other side. When it balanced out, it was the correct measurement. Sets complete with apothecary weight tokens and a small scale usually come in wooden boxes, and are hard to find complete with all weight tokens and grains.
- System began in Great Britain with the British Weights and Measures Act of 1878. Reference to the troy pound was made illegal and trade could only legally continue in the troy ounce of 480 grains (one-twelfth of 5,760 grains).

Apothecaries' Weight.			
<hr/>			
			Marked.
20 grains.....	make.....	1 scruple.....	℥
3 scruples.....		1 dram	ʒ
8 drams.....		1 ounce	℥
12 ounces.....		1 pound	℔
What is the use of Apothecaries' Weight?— Apothecaries use this weight in mixing their medicines, but buy their drugs by Avoirdupoise Weight.			

What Are They? Cont...

- An apothecaries weight is a version of the troy weight. Pounds and ounces still weigh the same as in troy weight, however, different units were used for the lighter weights. The smallest unit was the grain.
- Based on the troy weight system- each ounce equals 480 grains. These ounces are then divided into 8 drachms, which equal 60 grains each. One drachm equaled 3 scruples, which equaled 20 grains. Intermediate weight of 2 scruples, or 40 grains, existed. Also, an intermediate weight of 1 ½ scruples, or 30 grains, existed as well.
- Coin shaped apothecary weights have been objected to over the years by some who believe that too much dust accumulates in the deep inscriptions for them to be fully accurate.
- Square brass plates with shallow inscriptions or symbols are supposed to be superior to the coin shaped weights.

Weights Consisted of:

- \mathfrak{ss} = $\frac{1}{2}$ Scruple
- $3ss$ = $\frac{1}{2}$ Drachm
- \mathfrak{i} = 1 Scruple
- $3i$ = 1 Drachm
- \mathfrak{ij} = 2 Scruples
- $3ij$ = 2 Drachms
- Some sets consisted of a 4 Drachm and an 8 Drachm as well
- To complete the set of Apothecaries Weights there was also a set of 6 grain weights (1,2,3,4,5 & 6) and sometimes also a $\frac{1}{2}$ grain weight
- 20 grains = 1 scruple = 1.296 grams; 3 scruples = 1 drachm (dram) = 3.888 grams; 8 drachms = 1 troy ounce = 31.1 grams

Systems of Weights	Systems of Volume Measures	Linear Measure
AVOIRDUPOIS		
Primary unit of weight is the grain.		
437.5 grains = 1 ounce (av. oz.)		
16.0 ounces = 1 pound (av. lb.)		
APOTHECARY	APOTHECARY	
Primary unit of weight is the grain.		Smallest unit of volume is the minim.
20 grains (gr) = 1 scruple (\mathfrak{s})		60 minims (m) = 1 fluid dram (\mathfrak{z})
3 scruples = 1 dram (\mathfrak{z})		8 fluid drams = 1 fluid ounce (\mathfrak{z})
8 drams (480 gr) = 1 ounce (\mathfrak{z})		16 fluid ounces = 1 pint (p)
12 ounces = 1 pound (lb)		2 pints = 1 quart (qt.)
		4 quarts = 1 gallon (Cong. or gal.)
METRIC	METRIC	METRIC
Primary unit of weight is the gram.	Primary unit of volume is the liter.	Primary unit of linear measure is the meter.
1000.000 grams = 1 kilogram (kg)	1000.000 liters = 1 kiloliter (kl)	1000.000 meters = 1 kilometer (km)
100.000 grams = 1 hectogram (hg)	100.000 liters = 1 hectoliter (hl)	100.000 meters = 1 hectometer (hm)
10.000 grams = 1 dekagram (dkg)	10.000 liters = 1 dekaliter (dkl)	10.000 meters = 1 dekameter (dkm)
1.000 gram = 1 gram (gm)	1.000 liter = 1 liter (l)	1.000 meter = 1 meter (m)
0.1 gram = 1 decigram (dg)	0.1 liter = 1 deciliter (dl)	0.1 meter = 1 decimeter (dm)
0.01 gram = 1 centigram (cg)	0.01 liter = 1 centiliter (cl)	0.01 meter = 1 centimeter (cm)
0.001 gram = 1 milligram (mg)	0.001 liter = 1 milliliter (ml)	0.001 meter = 1 millimeter (mm)

NOTE: The relationship of the basic units in the Metric System should be noted. The meter, which is 1/40,000,000 of the earth's polar circumference, is the natural standard. The volume contained in 1/10 of a meter cubed is 1 liter. The weight of 1 cubic centimeter of distilled water is 1 gram. Grams of water are approximately equivalent at all temperature ranges. Current usage prefers that ml rather than cc be used since it has been found that 1000 cc do not equal exactly 1 liter.

Grain Weights

- Generally made of thin sheet brass with value stamped on them
- Grain weights were originally actual pieces of grain- first barley, then later on in Middle Ages, wheat (hence the name)
- Most of the time, grain weights only had annulets stamped onto them. Annulets were holes punched onto the brass
- In the beginning of the 20th Century, the annulets were replaced by 'GR' which stood simply for grains or GRAINS spelled out fully if piece was large enough
- Unique variations do exist: grain weights shaped in the numeral in which they weigh (a five grain shaped like the number 5 for example). These variations are rarer and generally sell these days for a high premium, especially in the UK



Set of 1950's Avery Grain Weights sold at an online auction.

The Worshipful Company of Founders

- Weights and measures were sized and tested as early as the sixteenth century- and apothecaries weights were no different.
- Weights and measures were sized and tested as a source of income for assayers and to prevent dishonesty from merchants. A six-pointed star found stamped anywhere on a weight token means it was found unsuitable for further use.
- One assayer was The Worshipful Company of Founders of London. Here is what their webpage says on the matter:
<https://www.foundersco.org.uk/weights-and-measures>



The First Apothecary Weight Designs

- Unknown manufacturer(s)
- Brass, stamped on obverse only (blank reverse)
- Rough design- cut kind of square and then filed down to correct weight
- These early sets came out around the same time as London's Worshipful Society of Apothecaries was becoming more influential; it is thought that they may have been responsible for these early sets of apothecary weight tokens (in the 18th century, only the Society would have had the contract to supply apothecary weight tokens, scales, etc. to the Army and the Admiralty).

Avery Weights

- W & T Avery Ltd of Birmingham (other factories may have made Avery weights as well- maker's initials B. & 'S.)
- One of the most important weight makers in British Empire in the 19th Century
- Difficult to date (1847 may indicate date of patent on some W. & T.A. tokens)
- Made coin and lozenge shaped weights
- From 1842 to 1883 weights had a diamond shaped registration mark on them
- From 1847 to 1911 weights marked 'W & T Avery' on larger weights and 'W.T.A.' on smaller weights
- Coin shaped Avery weights generally have an English crown on them





Set of early Avery grain weights

JLB Weights

- Prolific British manufacturer of medicine kits for household use that included weights with initials on them
- Only known by initials- little else known



H. Troemner

- Prolific apothecary weight token maker in Philadelphia.
- Troemner was a German locksmith who immigrated to the U.S. and settled down in Philadelphia, Pennsylvania in 1838
- Began making pharmaceutical balances in 1840, later started making coin weights—all signed with one of the following: H. TROEMNER, H. TROEMNER PHILA., H.T. PHILA., or only H.T. Philadelphia is sometimes (and unusually) abbreviated as PHILADA.



John. M. Maris

- Made American pharmaceutical weights (drams and scruples)
- Only signed with an M inside a diamond shape.
- Address on these for this maker is PHILA & NEW YORK.



P. Rogers & Co.

- Peter Rogers & Company, address is 48 Green St., Deritend, Birmingham.
- Firm established in 1820
- Manufactured scales and brass and iron apothecaries weights
- Little else known



CWTs Issued Looking Like Apothecary Weight Tokens

- JOHN P. GRUBER- New York scale and weight maker who issued 1863 Civil War token advertising his shop ('one dram' token). Cent sized copper token inscribed APOTH. WEIGHT [with Am. eagle on 2 laurel branches] / ONE DRAM / 1863 on obverse; on reverse has JOHN P. GRUBER / [a scale] / New York. Other similar civil war tokens of John P. Gruber's have his address- 178 Chatham SQ.
- HORTER- CWT used as a one dram weight. Reverse inscribed as ESTABLISHED / A. [2 story 3 window house] D./1850. WARMKESSEL HORTER. Token size of one cent and is brass. Maker is Horter.



What Happened To Them?

- In the 1960's a law was passed in Australia that introduced metric weights. This made apothecary weights obsolete and they were formally abolished.
- Soon after they were abolished, it became illegal to even have them on pharmacy premises in Australia.
- In 1978, apothecary weights were formally abolished in the United Kingdom as well [by the Weights and Measures Act of 1978] , and then the United States. Everything was replaced by metric weights in these countries as well.

References

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